

University of Groningen

Doing worse, but feeling happy

Groothof, H.; Siero, F.W.; Buunk, Abraham (Bram)

Published in:
Revue Internationale de Psychologie Sociale

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2007

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Groothof, H., Siero, F. W., & Buunk, A. (2007). Doing worse, but feeling happy: Social comparison and identification in response to upward and downward targets. *Revue Internationale de Psychologie Sociale*, 20(1), 125 - 143.

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

DOING WORSE, BUT FEELING HAPPY: SOCIAL COMPARISON AND IDENTIFICATION IN RESPONSE TO UPWARD AND DOWNWARD TARGETS

Hinke A.K. Groothof, Frans W. Siero, Abraham P. Buunk

Presses universitaires de Grenoble | « *Revue internationale de psychologie sociale* »

2007/1 Tome 20 | pages 125 à 143

ISSN 0992-986X

ISBN 9782706114052

Article disponible en ligne à l'adresse :

<https://www.cairn.info/revue-internationale-de-psychologie-sociale-2007-1-page-125.htm>

Pour citer cet article :

Hinke A.K. Groothof *et al.*, « Doing worse, but feeling happy: Social comparison and identification in response to upward and downward targets », *Revue internationale de psychologie sociale* 2007/1 (Tome 20), p. 125-143.

Distribution électronique Cairn.info pour Presses universitaires de Grenoble.

© Presses universitaires de Grenoble. Tous droits réservés pour tous pays.

La reproduction ou représentation de cet article, notamment par photocopie, n'est autorisée que dans les limites des conditions générales d'utilisation du site ou, le cas échéant, des conditions générales de la licence souscrite par votre établissement. Toute autre reproduction ou représentation, en tout ou partie, sous quelque forme et de quelque manière que ce soit, est interdite sauf accord préalable et écrit de l'éditeur, en dehors des cas prévus par la législation en vigueur en France. Il est précisé que son stockage dans une base de données est également interdit.

Doing worse, but feeling happy: Social comparison and identification in response to upward and downward targets

Hinke A.K. Groothof*

Frans W. Siero**

Abraham P. Buunk**

Abstract

We investigated people's responses to exposure to downward and upward targets. In Study 1, among 197 participants, it was predicted and found that such exposure led to a contrast effect on self-evaluation, and to an assimilation effect on affect. In Study 2, among 148 participants, it was predicted and found that the contrast effect on self-evaluation occurred in particular when

participants were induced to compare themselves with the target, and that the assimilation effect on affect occurred, in particular, when participants were induced to identify themselves with the target. This study provides preliminary evidence that social comparison and identification are separate processes that influence different variables, in opposite ways.

Key-words

Social comparison, Identification, Upward and Downward comparison targets, Assimilation and Contrast, Affects, Self-evaluation.

Imagine that you are reading an interview in a magazine with a student who recently moved to a different city to start her studies at the university there, just like you recently did. She says that she is rather unhappy because she has hardly any friends to visit and feels lonely. How would reading this interview make you feel and how would it influence your evaluation of your own social life? Likewise, if she told that she was very happy because she had made many new friends and

* Hinke A.K. Groothof.

Correspondence address: Open University of the Netherlands, Oude Boteringestraat 24, 9712 GH Groningen, The Netherlands. Tel. +31 50 313 8300. Fax +31 50 313 7961
hinke.groothof@ou.nl

** University of Groningen
a.p.buunk@rug.nl – f.w.siero@rug.nl

had a very good social life, how would reading the interview make you feel then and how would it influence your evaluation of your own social life?

Reading interviews about others who are either better off (upward targets) or worse off (downward targets) may evoke different responses. For example, Tesser (1988) has argued that exposure to upward targets may offer the opportunity to bask in the glory of these targets, but may also make oneself aware of one's inferior status. Likewise, exposure to downward targets may show that one is relatively well-off, but may also make one aware of how one's own situation may deteriorate (e.g., Lockwood, 2002). Buunk, Collins, Taylor, Van Yperen and Dakof (1990) were among the first to show that individuals may indeed exhibit negative as well as positive responses to upward and downward comparison. Such different effects are usually referred to as assimilation and contrast effects. In a broad sense, assimilation refers to perceiving oneself as similar to others, whereas contrast refers to perceiving oneself as different from others (cf. Biernat, Manis & Kobryniewicz, 1997). Thus, in the case of assimilation, an upward target will evoke a more positive response than a downward target, whereas in the case of contrast, an upward target will evoke a more negative response than a downward target.

Researchers have identified important factors that may influence whether assimilative or contrastive responses occur, for example, the perceived vulnerability to the fate of the comparison target (e.g. Lockwood, 2002), the personal relevance of the comparison target (Tesser, 1988), the distinctness of the other and the mutability of selves (Stapel & Koomen, 2000), psychological closeness (e.g. Pelham & Wachsmuth, 1995) and the well-being of the comparer (e.g. Buunk, Ybema, Gibbons, & Ipenburg, 2001b; Van der Zee, Buunk & Sanderman, 1998). In addition, Smith (2000) provides a taxonomy for the affective responses after exposure to upward and downward targets (see also, Buunk, Kuyper & Van der Zee, 2005).

In spite of these important insights, there is still little understanding of the underlying processes that foster the assimilative and contrastive responses. Using knowledge from social cognition research, Mussweiler and Strack (2000) proposed a theory

that may help to learn more about the specific judgmental processes that underlie the effects of social comparison. Their theory predicts what knowledge will become accessible during social comparison, and how the applicability and representativeness of that knowledge may influence affective, self-evaluative and behavioral consequences of social comparison.

Using a different approach, in the present research, we tried to further the understanding of the processes that underlie assimilation and contrast responses to upward and downward exposure, by differentiating between two important processes: A social comparison process and an identification process. We will explain that both processes are related to two different outcome variables, and will lead to opposite responses on these outcome variables. We will argue that, when individuals are confronted with a target, a comparison process will foster a contrast response on self-evaluation, and an identification process will foster an assimilation response on affect.

Exposure to a target may result in a change in *self-evaluation* due to a cognitive process that involves assessing how one is doing in comparison with the target. Logically speaking, just evaluating oneself against another individual as a standard, will lead to a contrast response (see Stapel & Suls, 2004). To put it simply, one will consider oneself as small in comparison with a big target, and as big in comparison with a small target. Indeed, an increasing number of studies is showing that self-evaluations tend to be more positive after exposure to a downward than after exposure to an upward target (e.g., Morse & Gergen, 1971; Mussweiler, 2001; Stapel & Koomen, 2000). Although it has been argued that social comparison involves primarily similarity testing (Mussweiler & Strack, 2000; Mussweiler, 2001), we assume that social comparison involves primarily evaluating oneself against a standard. That is, when people compare themselves with someone else, they use the other as a reference-point to evaluate themselves against (see Stapel & Koomen, 2000; Tesser, 1988). Therefore, we predicted that people will evaluate themselves more positively after exposure to a downward target than after exposure to an upward target, especially when they engage in a social comparison process.

Exposure to a target may not only result in a change in self-evaluation, but also – and often simultaneously – in a change in *affect*, due to a more intuitive, direct, and primary process (cf. Clore, Schwarz, & Conway, 1994; Epstein & Pacini, 1999; Zajonc, 1998). This process will result in a response that is in tune with the affective nature of the situation of the target, and will reflect sympathy and empathy with the target. Thus, logically speaking, such sympathy and empathy will lead to an assimilation response. One will feel good when the other feels good, and feel bad when the other feels bad. Indeed, in studies in which participants are presented with vivid descriptions of comparison targets, the general pattern tends to be that upward comparisons induce more positive and less negative affect than downward comparisons (e.g., Aspinwall & Taylor, 1993; Buunk, Van der Zee & Van Yperen, 2001a; Ybema, Buunk & Heesink, 1996). We assume that such assimilation effects on affect reflect primarily an identification process (cf. Morling & Epstein, 1997). Identification has been defined in various ways, for example as closeness to the target (Tesser, 1988), as forming a bond with the target (e.g., Miller, Turnbull & McFarland, 1988), or as being similar in personality to the target (Wills, 1991). In the present model, identification refers to recognizing oneself in the other, feeling connected with the other, and viewing the situation of the target as a potential future for oneself (Buunk & Ybema, 1997; Van der Zee, Buunk, Sanderman, Botke & Van den Bergh, 1999). Similar as the experiential system described by Epstein (see Epstein & Pacini, 1999), the identification process is assumed to operate by rules of affect, and to be associatively and holistically. Identification is not the opposite of comparison, but a qualitatively distinct process that will primarily induce assimilative effects on affect rather than on self-evaluation. Therefore, we predicted that people will respond with more positive affect after exposure to an upward target than after exposure to a downward target, especially when they engage in an identification process.

In sum, exposure to targets may lead to a contrast effect on self-evaluation, and to an assimilation effect on affect. These effects are assumed to be due to two distinct processes, i.e. social comparison and identification, that involve qualitatively different processes that influence different variables, and do so in opposite

ways. In two studies, the participants – all first-year students – were exposed to an interview with either an upward or a downward target, i.e. another first-year student who talked about his or her social life. Going to college in an unknown city is for many students an important transitional time in which forming new friendships and building up a new social network have high priority, making one's social life an important comparison dimension. Only a few studies have found simultaneously support for a contrast effect of exposure to a target on self-evaluation, and an assimilation effect on affect (Bui & Pelham, 1999; Buunk & Ybema, 2003). Therefore, we examined if these effects were also obtained in the present study. To test unambiguously whether the affective and self-evaluative responses are due to identification and social comparison respectively, in Study 2, we experimentally induced social comparison and identification with the upward and downward target. We instructed participants to either compare or identify themselves with the targets, and examined if social comparison would enhance the contrast response on self-evaluation, and if identification would enhance the assimilation response on affect.

Study 1

Method

Participants and procedure

During an obligatory first-year psychology course, 197 students participated in the paper-and-pencil study. Participants were randomly assigned to one of two conditions (direction of exposure: upward, downward). The average age of the participants was 20.0 years ($SD = 1.7$).

Direction of exposure

The description of the upward and downward target was based on actual in-depth interviews with first-year students and was presented as a newspaper-article. The articles described an interview with a first-year student about his or her social life (the sex of the target was not specified). In the upward version, the student is very positive about his or her social life. The student

has become acquainted with many fellow-students, has formed good friendships with some of them, gets along with roommates, and can always find someone to have fun with or have a good conversation with. In the downward version, the student is rather negative about his or her social life. The student has no real friends and stands alone during breaks at college, has hardly any contact with roommates, and is often alone, watching TV, or studying. Preliminary tests of the interviews had shown that the participants' dominant response to both the upward and downward interview was to relate the information about the target to themselves, either through comparing or identifying themselves.

Affect

As we were particularly interested in *the responses to the targets*, we asked participants directly how they felt in response to the interview, i.e. "To what extent does this fragment arouse positive feelings in you?" and "To what extent does this fragment arouse negative feelings in you?". Answers were given on a 5-point scale (1 = *not*, 5 = *very strongly*). The correlation between both items was $-.79$ ($p < .001$). They, therefore, could be combined into one scale, with higher values indicating a more positive affective response.

Self-evaluation

Also with respect to self-evaluation we asked participants explicitly to what extent their self-evaluation had changed in response to the target. Because people may be reluctant to admit being affected by upward or downward exposure (see Wood, 1996), a short introduction was given in which it was explained that it is quite common for most, but not all, people to be affected by information about others. The measure consisted of 4 items. The items were "After reading this interview fragment, to what extent are you more or less satisfied with your own social life, or has nothing changed?", "After reading this interview fragment, to what extent are you more or less secure about your own social life, or has nothing changed?", "After reading this interview fragment, to what extent do you feel more or less lonely, or has nothing changed?", and "After reading this interview fragment, to what extent do you worry more or less about your own social life,

or has nothing changed?”). Answers were given on a 9-point scale (e.g., 1 = *much more worried*, 5 = *no change*, and 9 = *much less worried*). Two items were recoded so that higher scores indicated that the participants’ evaluative response was more positive. Internal consistency was good ($\alpha = .81$).

Manipulation check

To check whether participants actually perceived the upward target as better-off and the downward target as worse-off than themselves, they were asked to indicate on a 9-point scale how they rated the target’s social life in comparison with their own social lives (1 = *much worse*, 5 = *about the same*, and 9 = *much better*).

Results and Discussion

Manipulation check

An Analysis of Variance (ANOVA) revealed that, in comparison with their own social lives, participants rated the target’s social life as better in the upward condition than in the downward condition ($M = 5.16$, $SD = 1.34$ vs. $M = 3.13$, $SD = 2.48$; $F(1,191) = 49.34$, $p < .001$). Four participants failed to answer this question. However, only the mean rating in the downward condition differed significantly from 5, the point at which the target’s social life is evaluated as equally good as the participants’ own ($t(97) = -7.45$, $p < .001$). Thus, the participants did evaluate the downward target as worse-off, but did not evaluate the upward as superior, but as equally well-off.

Affect and self-evaluation in response to the targets

Two ANOVA’s showed a main effect of direction upon affect. Affect was more positive in response to the upward target than in response to the downward target ($M = 3.86$, $SD = 0.80$ vs. $M = 1.72$, $SD = 0.81$; $F(1, 194) = 341.69$, $p < .001$). In contrast, self-evaluation was more positive in response to the downward target than in response to the upward target, ($M = 5.77$, $SD = 1.07$ vs. $M = 4.87$, $SD = 0.76$; $F(1, 194) = 46.06$, $p < .001$). Thus, the present findings confirmed those obtained by Bui and Pelham

(1999) and Buunk and Ybema (2003) that direction of exposure has an opposite effect on affect than on self-evaluation.

In Study 2, it was examined whether a social comparison and an identification process underlie these effects. Participants were either induced to compare or to identify themselves with the upward or downward target, so it could be experimentally tested if the effect on affect was more pronounced when participants were induced to identify themselves with the target, and the effect on self-evaluation was more pronounced when participants were induced to compare themselves with the target.

Study 2

Method

Participants and design

During an obligatory first-year psychology course, 153 psychology students participated in our paper-and-pencil study. Five students were excluded from the data because they were 40 years or older. The average age of the resulting 148 participants was 20.2 years ($SD = 1.9$). Participants were randomly assigned to one of four conditions of the 2 (direction of exposure: upward, downward) X 2 (instruction: identification, social comparison) design.

Procedure

The participants were presented the same bogus newspaper articles as in Study 1. The comparison instructions read as follows: *When someone tells something about himself, for example, about how things are going with his studies or about an experience which he had, a common reaction of listeners is that they **compare** themselves with the other. Many people start thinking about their **own experiences** when someone tells them something that might also happen to them.*

*On the next page, you will find an interview with a first-year student that appeared in the media last year. The section in which this person tells about his or her social life will offer people who are also first-year students many opportunities for **comparison**.*

*When you read this interview in a minute, **compare** yourself as much as possible with this person.*

*With reference to this student's story, think about your own social life and try to assess how your social life is at this moment, **compared to** this student.*

The identification instructions read as follows:

*When someone tells something about himself, for example, about how things are going with his studies or about an experience which he had, a common reaction of listeners is that they **recognize** themselves in the other. Many people realize that they **have a lot in common** with other people and that they **resemble others** in many ways.*

On the next page, you will find an interview with a first-year student that appeared in the media last year. The section in which this person tells about his or her social life will sound very familiar to people who are also first-year students.

*When you read this interview in a minute, pay the most attention to things you **have in common** with this person. Assume that the other is **someone just like you**. When you don't recognize much of yourself in the other, imagine that in the future things might be **the same** for you as for this person.*

Measures

The same measure for affect was taken as in Study 1. The correlation between both items was $-.85$ ($p < .001$), and therefore, they were again combined into one scale, with higher values indicating a more positive affective response. Also, the same measure for self-evaluation was taken as in Study 1, ($\alpha = .85$). As a manipulation check of direction of exposure, the following question was asked: "How positive or negative is the image that the person in the interview portrays of his or her social life?" (1 = *very positive*, 9 = *very negative*). As a manipulation check of social comparison, the following items were used: "To what extent did you start thinking about yourself and your own social life?", "To what extent did you compare your own situation with that of this person?", "To what extent did you look for differences and similarities between yourself and this person?", and "To what extent were you inclined to assess how good or bad your social life is?". The manipulation check of iden-

tification included the following items (see also Ybema & Buunk, 1995): “Could you recognize yourself in this person?”, “Did you think you resemble this person?”, and “To what extent did you think that in the future things might become (or stay) the same for you as for this person?”. Answers were given on 5-point scales (1 = *not*, 5 = *very strong*). The internal consistency of both scales was good; $\alpha = .91$ for the social comparison scale and $\alpha = .79$ for the identification scale.

Results and Discussion

Manipulation checks

Direction of exposure. An ANOVA revealed that the participants felt that the upward target described his or her social life more positively ($M = 2.31$, $SD = 1.39$) than the downward target ($M = 7.82$, $SD = 1.02$; $F(1,142) = 760.95$, $p < .001$). No effect of instruction was found.

Degree of comparison. A second ANOVA showed that the instruction of comparison was successful in the downward condition, but not in the upward condition. The ANOVA revealed a significant interaction between direction and instruction ($F(1, 140) = 3.96$, $p < .05$), indicating that in the downward condition, comparison was higher in the comparison condition than in the identification condition ($M = 3.76$, $SD = 0.68$ vs. $M = 3.33$, $SD = 0.97$), but not in the upward condition ($M = 3.06$, $SD = 1.01$ versus $M = 3.22$, $SD = 0.80$). We suppose that this latter effect may indicate a self-defensive reaction implying a resistance to comparing oneself with someone clearly well-off.

Degree of identification. A third ANOVA showed the predicted main effect of instruction upon identification, indicating that identification was higher in the identification condition than in the comparison condition ($F(1,143) = 6.95$, $p < .01$; $M = 1.94$, $SD = .88$ versus $M = 1.61$, $SD = .59$). Thus, the manipulation of identification appeared successful. There was also, not surprisingly (cf. Ybema & Buunk, 1995), a significant effect of direction, with more identification occurring with the upward than with the downward target ($F(1,143) = 4.42$, $p < .05$; $M = 1.90$, $SD = 0.73$ vs. $M = 1.64$, $SD = .77$). The interaction was not significant ($F < 1$).

Main analysis

Affect. A 2 (direction of exposure: upward and downward) X 2 (instruction: social comparison and identification) ANOVA with the affective response as dependent variable revealed the predicted interaction between direction and instruction ($F(1,141) = 4.92, p < .05$). This interaction indicates that the response to upward versus downward exposure was different in the identification condition versus the comparison condition. Inspection of the means and the simple main effects revealed that affect was more positive in response to the upward target than in response to the downward target, and, in accordance with our hypothesis, that this effect was stronger in the identification condition ($M = 4.07; SD = 0.55$ vs. $M = 1.65; SD = 0.74$; $F(1,141) = 151.24, p < .001$), than in the comparison condition ($M = 3.62; SD = .90$ vs. $M = 1.80; SD = 0.91$; $F(1,141) = 98.48, p < .001$; see Figure 1).

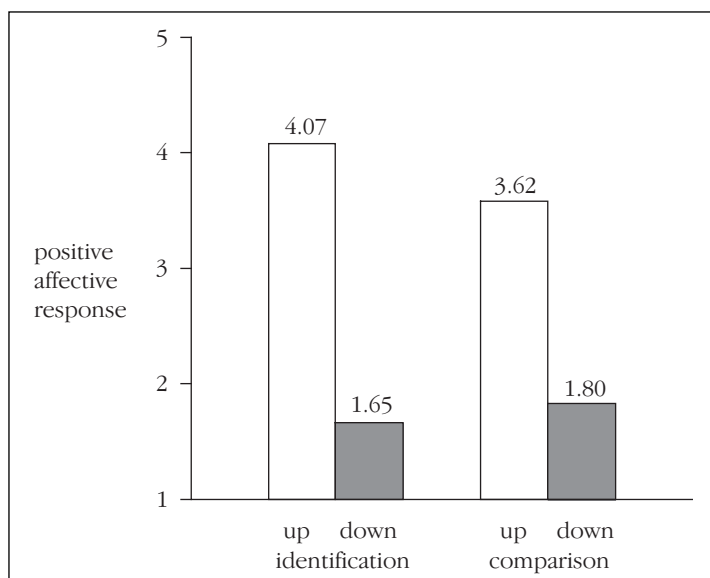
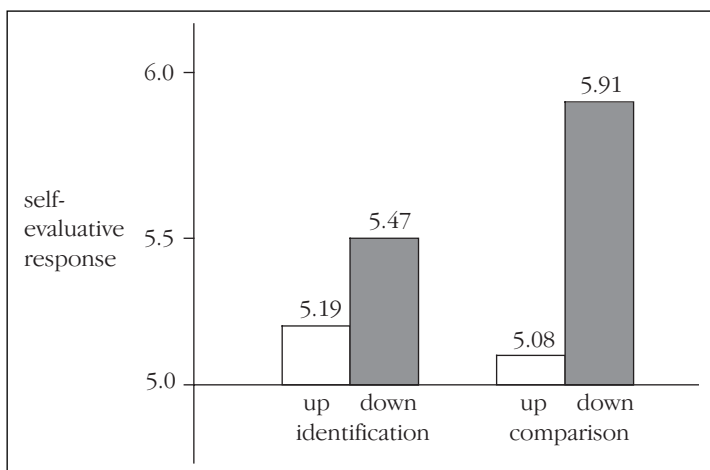


FIGURE 1:
Affect in response to
upward and
downward exposure
in the identification
condition and in the
comparison condition.

Self-evaluation. A similar 2 X 2 ANOVA with self-evaluation as the dependent variable also revealed the predicted interaction between direction and instruction ($F(1,144) = 3.36, p < .05$), indicating that the response to upward versus downward exposure was different in the identification condition versus the comparison condition. Inspection of the means and the simple main effects revealed that, self-evaluation was more positive in response to the downward target than in response to the upward target, and, in accordance with our hypothesis, that this effect was stronger in the comparison condition ($M = 5.91; SD = 1.03$ vs. $M = 5.08; SD = 0.79; F(1,144) = 15.91, p < .001$), than in the identification condition ($M = 5.47; SD = 1.08$ vs. $M = 5.19; SD = 0.66; F(1,144) = 1.58, ns$; see Figure 2).

FIGURE 2:
Self-evaluation in
response to upward
and downward
exposure in the
identification
condition and in the
comparison condition.



In sum, in Study 2, the effects of Study 1 were replicated, and, as predicted, the contrast effect on self-evaluation was most pronounced in the comparison condition, whereas the assimilation effect on affect was most pronounced in the identification condition. The findings provide preliminary evidence that social comparison underlies the self-evaluative responses, and identification the affective responses to exposure to an upward or downward target, and that the two are qualitatively different kinds of processes, leading to qualitatively different kinds of responses.

General discussion

In the present two studies we assumed that changes in self-evaluation and affect in response to better-off and worse-off targets may occur, but concern separate processes, respectively a social comparison process and an identification process. These processes would influence different variables, and would do so in opposite ways. In line with Bui and Pelham (1999) and Buunk and Ybema (2003), we predicted, and found in both studies, that exposure to upward and downward targets led to a contrast effect on self-evaluation, and to an assimilation effect on affect. Moreover, we predicted, and found, that induced social comparison enhanced the contrast effect on self-evaluation, and induced identification enhanced the assimilation effect on affect. Thus, comparing oneself with the lonely and unhappy student increased satisfaction with one's own social life, while, simultaneously, identification with this student evoked a negative affective response. Comparing oneself with the happy and socially active student decreased satisfaction with one's own social life, whereas identifying oneself with this student evoked a positive affective response. Noteworthy, although the participants in Study 2 were literally instructed to compare themselves, not to contrast themselves, it appeared that this instruction led to contrastive responses on self-evaluation.

Our findings may contribute to the social comparison literature in various ways. First, the present research is the first to show that experimentally induced identification leads to an assimilation effect on affect. While identification has been found to be correlated with affective responses to social comparison (Buunk, *et al.*, 2001a; Buunk, *et al.*, 2001b; Ybema & Buunk, 1995; Ybema, *et al.*, 1996), thus far no research had manipulated identification experimentally. Our research thus underlines the importance of identification for the affective responses to targets of social comparison. A second contribution of the present research is that the findings add to the small number of studies that have examined the effects of experimentally induced social comparison. Martin and Gentry (1997) and Cattarin, Thompson, Thomas, and Williams (2000) found that, when females were instructed to compare themselves with attractive models in ads

or commercials, the self-perceptions of their own appearance were lowered. Our research expands these findings to social comparison of one's social life, and underlines that social comparison leads primarily to a contrast effect on self-evaluation. It must be emphasized, though, that social comparison does not necessarily involve a conscious, deliberate process. Gilbert, Giesler and Morris (1995) demonstrated that social comparisons may often occur automatically, and Mussweiler, Rüter and Epstude (2004) and Stapel and Blanton (2004) demonstrated that social comparison effects may occur in response to subliminally presented stimuli. Future research might examine if identification processes also may occur outside cognitive awareness.

One may argue that the dependent variables could be susceptible to demand characteristics. That is, because the questions assessing the responses to upward and downward exposure directly referred to the targets, participants may have tried to guess the researcher's interest and adjust their answers accordingly. It may be that, because participants were made aware of a possible influence of the interviews, they consciously or unconsciously exaggerated their responses. It must be noted, however, that it seems very unlikely that participants may have guessed that opposite responses were expected on self-evaluation and affect, and that, in Study 2, the self-evaluative and affective responses were expected to be differentially influenced by the comparison or identification instruction. As noted in the Method section, we were primarily interested in these *differences* between the responses on affect and self-evaluation.

We suppose that people may have responded in a self-defensive way (for similar results see Stapel & Koomen, 2001; Ybema *et al.*, 1996). For example, in Study 1, people did evaluate the upward target as better than the downward target, but not as better-off than themselves. We suppose that people may be reluctant to see the upward target as better-off, because they were trying to avoid the pain associated with it. Similar, in Study 2, people compared more downward and identified more upward. This may also indicate a self-defensive reaction, because we would expect that when they had identified themselves more with the downward target, and when they had compared themselves more with the upward target, they would have responded with less positive

affect and a less positive self-evaluation in those cases. It should be noted that these self-defensive responses did not undermine the testing of our hypotheses, but in fact offered a more stringent test of the hypothesis. When people did evaluate the upward target as better-off and when they had compared more upward and identified more downward, we would have expected even stronger differential responses on affect and self-evaluation. Since the self-defensive hypothesis is an ad hoc interpretation of our result, it should be investigated more directly in future research. While we were particularly interested in the differential responses to upward and downward targets, and the differential response to identification and social comparison with upward and downward targets, our research did not include control conditions in which participants were not exposed to a target (Study 1), or did not receive instructions (Study 2). Of course, including such control conditions would provide interesting additional knowledge, and might have strengthened the interpretation of the present results, the present research questions did not require a control condition.

In sum, affective and self-evaluative responses to social comparison targets seem to be caused by different processes. Depending on what kinds of responses are considered, people may respond either positively or negatively to exposure to others. A practical implication may be that people can be learned to focus on the positive responses of exposure to others who are better or worse-off, by learning them to compare downward and to identify upward. Future research may be aimed at studying more directly the evaluative nature of the social comparison and the affective nature of the identification process, and at studying possible interactions between both processes. In addition, it would be interesting to study how social comparison and identification relate to the judgmental processes proposed by Mussweiler and Strack (2000).

References

- Aspinwall, L. G., & Taylor, S. E. (1993). Effects of social comparison direction, threat, and self-esteem on affect, self-evaluation, and expected success. *Journal of Personality and Social Psychology*, 64, 708-722.
- Biernat, M., Manis, M., & Kobryniewicz, D. (1997). Simultaneous assimilation and contrast effects in judgments of self and others. *Journal of Personality and Social Psychology*, 73, 254-269.
- Bui, K. V. T., & Pelham, B. W. (1999). Cognitive and affective reactions to social comparison. *Journal of Social Behavior and Personality*, 14, 569-583. Electronic paper.
- Buunk, B. P., Collins, R. L., Taylor, S. E., Van Yperen, N. W., Dakof, G. A. (1990). The affective consequences of social comparison: Either direction has its ups and downs. *Journal of Personality and Social Psychology*, 59, 1238-1249.
- Buunk, B. P., Kuyper, H., & Van der Zee, Y. G. (2005). Affective Response to Social Comparison in the Classroom. *Basic and Applied Social Psychology*, 27(3), 229-237.
- Buunk, B. P., Van der Zee, K., & Van Yperen, N. W. (2001a). Neuroticism and social comparison orientation as moderators of affective responses to social comparison at work. *Journal of Personality*, 69, 745-763.
- Buunk, B. P., & Ybema, J. F. (1997). Social comparisons and occupational stress: The identification-contrast model. In B. P. Buunk & F. X. Gibbons, (Eds.) *Health, coping and well-being: Perspectives from social comparison theory* (pp.359-388). Hillsdale, NJ: Erlbaum.
- Buunk, B. P. & Ybema, J. F. (2003). Feeling bad, but satisfied: The effects of upward and downward comparison with other couples upon mood and marital satisfaction. *British Journal of Social Psychology*, 42, 613-628.
- Buunk, B. P., Ybema, J. F., Gibbons, F. X., & Ipenburg, M. L. (2001b). The affective consequences of social comparison as related to professional burnout and social comparison orientation. *European Journal of Social Psychology*, 31, 337-351.

Cattarin, J. A., Thompson, J. K., Thomas, C., & Williams, R. (2000). Body image, mood, and televised images of attractiveness: The role of social comparison. *Journal of Social and Clinical Psychology, 19*, 330-239.

Clore, G. L., Schwarz, N., & Conway, M. (1994). Affective causes and consequences of social information processing. In R. S. Wyer, Jr., & T. K. Srull (Eds.), *Handbook of social cognition* (Vol. 1, pp. 323-417). Hillsdale, NJ: Lawrence Erlbaum.

Epstein, S., & Pacini, R. (1999). Some basic issues regarding dual-process theories from the perspective of cognitive-experiential self-theory. In S. Chaiken & Y. Trope (Eds.), *Dual-process theories in social psychology* (pp. 462-482). New York: The Guilford Press.

Gilbert, D. T., Giesler, R. B., & Morris, K. A. (1995). When comparisons arise. *Journal of Personality and Social Psychology, 69*, 227-236.

Lockwood, P. (2002). Could it happen to you? Predicting the impact of downward comparison on the self. *Journal of Personality and Social Psychology, 82*, 343-358.

Martin, M. C., & Gentry, J. W. (1997). Stuck in the model trap: The effects of beautiful models in ads on females pre-adolescents and adolescents. *Journal of Advertising, 26*, 19-33.

Miller, D. T., Turnbull, W., & McFarland, C. (1988). Particularistic and universalistic evaluation in the social comparison process. *Journal of Personality and Social Psychology, 55*, 908-917.

Morling, B., & Epstein, S. (1997). Compromises produced by the dialectic between self-verification and self-enhancement. *Journal of Personality and Social Psychology, 73*, 1268-1283.

Morse, S. J., & Gergen, K. J. (1971). Material aid and social attraction. *Journal of Applied Social Psychology, 1*, 150-162.

Mussweiler, T. (2001). Focus of comparison as a determinant of assimilation versus contrast in social comparison. *Personality and Social Psychology Bulletin, 27*, 38-47.

Mussweiler, T., & Strack, F. (2000). Consequences of social comparison: Selective accessibility, assimilation, and contrast. In

J. Suls & L. Wheeler (Eds.), *Handbook of social comparison* (pp. 253-270). New York: Kluwer Academic Publishers.

Mussweiler, T., Rüter, K., & Epstude, K. (2004). The man who wasn't there: Subliminal social comparison standards influence self-evaluation. *Journal of Experimental Social Psychology*, 40, 689-696.

Pelham, B. W., & Wachsmuth, J. O. (1995). The waxing and waning of the social self: Assimilation and contrast in social comparison. *Journal of Personality and Social Psychology*, 69, 825-838.

Smith, R. H. (2000). Assimilative and Contrastive Emotional Reactions to Upward and Downward Social Comparisons. In J. Suls & L. Wheeler (Eds.), *Handbook of Social Comparison. Theory and Research* (pp. 173-200). New York: Kluwer Academic Publishers.

Stapel, D. A., & Blanton, H. (2004). From seeing to being: Subliminal social comparisons affect implicit and explicit self-evaluations. *Journal of Personality and Social Psychology*, 87, 468-481.

Stapel, D. A., & Koomen, W. (2000). Distinctness of others, mutability of selves: Their impact on self-evaluations. *Journal of Personality and Social Psychology*, 79, 1068-1087.

Stapel, D. A., & Koomen, W. (2001). I, we, and the effects of others on me: How self-construal level moderates social comparison effects. *Journal of Personality and Social Psychology*, 80, 766-781.

Stapel, D. & Suls, J. (2004). Method matters: Effects of explicit versus implicit social comparisons on activation, behavior, and self-views. *Journal of Personality and Social Psychology*, 87, 860-875.

Tesser, A. (1988). Toward a self-evaluation maintenance model of social behavior. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology*, (Vol. 21, pp. 181- 227). New York: Academic Press.

Van der Zee, K., Buunk, B. P., Sanderman, R. (1998). Neuroticisms and reactions to social comparison information among cancer patients. *Journal of Personality*, 66, 175-194.

Van der Zee, K., Buunk, B. P., Sanderman, R., Botke, G., & Van den Bergh, F. (1999). The Big Five and identification-contrast processes in social comparison in adjustment to cancer treatment. *European Journal of Personality*, 13, 307-326.

Wills, T. A. (1991). Similarity and self-esteem in downward comparison. In J. Suls & T. A. Wills (Eds.), *Social comparison: Contemporary theory and research* (pp. 51-78). Hillsdale, NJ, England: Lawrence Erlbaum Associates.

Wood, J. V. (1996). What is social comparison and how should we study it? *Personality and Social Psychology Bulletin*, 22, 520-537.

Ybema, J. F., & Buunk, B. P. (1995). Affective responses to social comparison: A study among disabled individuals. *British Journal of Social Psychology*, 34, 279-292.

Ybema, J. F., Buunk, B. P., & Heesink, J. A. M. (1996). Affect and identification in social comparison after loss of work. *Basic and Applied Social Psychology*, 18, 151-169.

Zajonc, R. B. (1998). Emotions. In D. T. Gilbert & S. T. Fiske (Eds.), *Handbook of social psychology* (pp. 591-632). New York: McGraw-Hill.